A Conference in Honor of the 60th Birthday of Jochen Brüning

ZEIT:
1.11.2007, 13:30 Uhr - 2.11.2007, 12:30 Uhr

ORT:
HU-Berlin
Unter den Linden 6
Raum 3038 (Weierstrass Hörsaal)

PROGRAMM:

1.11.2007

13:30 - 14:20 **Werner Ballmann**

Remarks on joint work with Jochen Brüning

14:30 - 15:20 **Matthias Lesch**

Differential operators of Fuchs type
I will review some of the work by Brüning, Seeley and myself on elliptic operators on manifolds with conic singularities. I will also mention some recent developments.

15:20 - 16:00 Kaffeepause

16:00 - 16:50 **Paolo Piazza**

Rho invariants in topology and differential geometry
Rho-invariants are secondary invariants of Dirac operators; the aim of this talk is to survey the basic results in the field, explain their interest and announce a few recent results about their generalization to the foliated context. More precisely, let G be a discrete group and let M be a closed oriented manifold with fundamental group G. I will consider various rho-invariants associated to the signature operator

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on M and to the Dirac operator (in the spin case) : the Atiyah-Patodi-Singer rho invariant, the Cheeger-Gromov rho-invariant and the delocalized rho-invariant of Lott. I will talk about the behavior of these rho-invariants under deformation of the metric, or of the differentiable structure or of the homotopy type of the manifold: rather surprisingly, this behavior depends on the nature of the fundamental group of the manifold and is radically different depending whether the group G has torsion or is torsion-free. In the last part of my talk I will move to measured foliations and announce recent results in collaboration with Moulay Benameur.

17:00 - 17:50 **Xiaonan Ma**

Berezin-Toeplitz quantization and symplectic reduction
As an application of our asymptotic expansion of the G-invariant Bergman kernel on a symplectic manifold with a Hamiltonnian group action G, we study the Berezin-Toeplitz quantization under the symplectic reduction.

18:30 Conference Banquet

2.11.2007

7:30 - 8:00 Petit déjeuner

8:00 - 8:50 **Jean-Michel Bismut**

The hypoelliptic Laplacian

9:00 - 9:50 **Kenji Ueno**

Conformal Field Theory and Modular Functor

9:50 - 10:40 Brunch

10:40 - 11:30 **Sergey Dobrokhotov**

Propagation of Gaussian wave packets in quantum thin periodic waveguides with nonlocal nonlinearity

11:40 - 12:30 **Henri Moscovici**

Index theory and Hopf algebra symmetry

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